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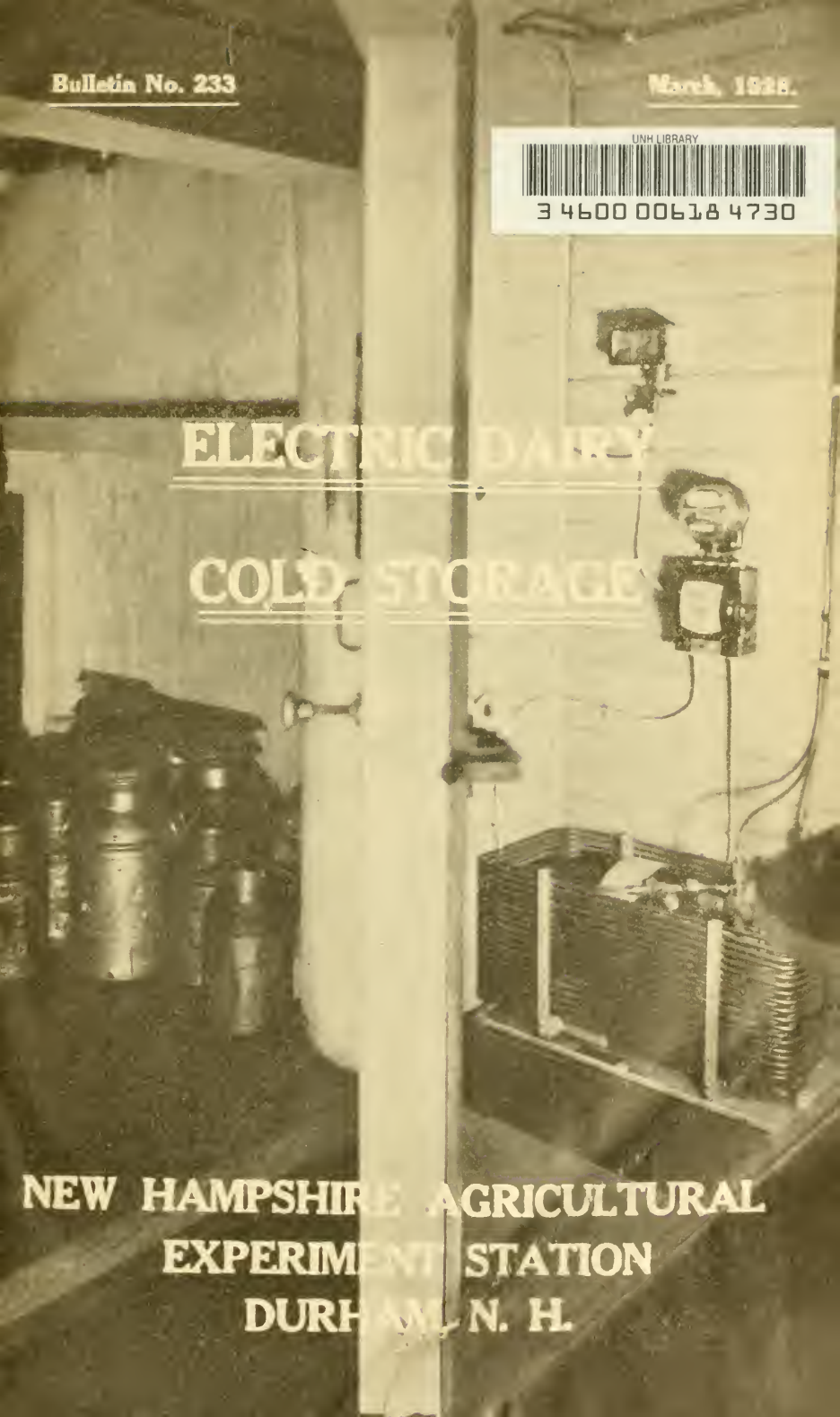

ELECTRIC DAIRY COLD STORAGE

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION
DURHAM, N. H.

Bulletin ~~238~~ 237 January, 1929

THE UNIVERSITY OF NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION

DEPARTMENT OF AGRICULTURAL CHEMISTRY

Inspection of Commercial Fertilizers for 1928

MADE FOR THE

STATE DEPARTMENT OF AGRICULTURE

T. G. Phillips, T. O. Smith and F. S. Schlenker

THE UNIVERSITY OF NEW HAMPSHIRE
DURHAM, N. H.

INSPECTION OF COMMERCIAL FERTILIZERS

MADE FOR THE STATE DEPARTMENT OF AGRICULTURE

The inspection of commercial fertilizers reported in this bulletin was made under the direction of the Honorable Andrew L. Felker, Commissioner of Agriculture. The state inspector, Mr. Eugene D. Sanborn, collected samples of 128 brands of fertilizer materials which were offered for sale by dealers or had been delivered to consumers between March and June, 1928. The general character of the fertilizer materials collected is shown by the following classification:

Complete fertilizer	96
Nitrogen and phosphoric acid	1
Nitrate of soda	7
Ground bone	6
Sheep manure	6
Superphosphate (acid phosphate)	3
Sulphate of ammonia	2
Tankage	2
Sheep and goat manure	2
Goat manure	1
Basic slag	1
Muriate of potash	1
	128

THE FERTILIZER LAW.

The New Hampshire fertilizer law applies to all fertilizer materials offered for sale, whether mixed materials in the form of complete fertilizers or unmixed materials as superphosphate (acid phosphate), nitrate of soda, ground bone, tankage, etc. Under the provisions of the law every manufacturer or dealer who shall sell or offer for sale any fertilizer material shall furnish with each lot or package a clearly printed statement certifying the brand name under which it is sold, the name and address of the manufacturer, the number of net pounds the package contains and a chemical analysis stating the minimum percentages of nitrogen, of total phosphoric acid, of available phosphoric acid and of water soluble potash. No person shall sell or offer for sale any pulverized leather, hair or wool waste, peat, garbage tankage, or any inert material whatsoever, without an explicit printed statement of the fact conspicuously fixed to every package of such material.

The state official in charge of the administration of the fertilizer law is the Commissioner of Agriculture.

In Table I are given the grades of complete fertilizers collected, the number of brands found in each grade, the average analysis of each grade and the average retail price per ton.

TABLE I

Formula	Number of brands	Average per cent nitrogen	Average per cent total phosphoric acid	Average per cent available phosphoric acid	Average per cent water soluble potash	Average retail price per ton
1—9—4	3	1.06	9.65	8.98	3.99	41.00
1—10—3	1	0.84	10.91	10.35	3.00	....
2—8—2	3	1.83	8.67	8.11	2.25	36.67
2—8—10	3	1.85	8.72	7.91	10.49	49.67
2—9—3	6	1.70	9.42	8.93	3.10	41.83
2—10—2	4	1.71	10.53	9.98	2.20	36.25
2—10—4	1	1.76	11.09	10.45	4.36	....
2—12—4	3	1.97	12.46	11.82	4.39	41.67
3—8—4	11	2.55	8.81	7.96	4.09	40.18
3—8—6	1	3.09	10.10	8.20	6.56	....
3—8—10	1	2.72	9.18	8.14	10.00	....
3—10—4	1	2.51	10.56	9.48	4.05	48.00
3—10—6	2	2.64	11.10	10.27	6.16	42.50
3—12—3	1	2.70	12.60	12.00	3.04	33.40
4—6—10	9	3.32	6.80	6.13	10.13	47.22
4—8—4	8	3.34	8.79	8.01	4.17	44.29
4—8—6	1	3.29	8.58	8.00	6.36	50.00
4—8—7	3	3.35	8.86	8.41	7.06	47.33
4—8—10	2	3.31	8.55	8.00	10.08	52.50
4—10—4	1	3.35	11.16	10.52	4.08	50.00
4—12—4	1	3.39	12.58	12.33	4.59	120.00
4—16—4	1	3.44	17.12	16.04	4.28	42.60
5—8—7	12	4.14	8.81	7.95	7.12	48.34
5—10—5	3	4.09	10.98	10.15	5.28	44.30
6—6—4	1	4.88	6.97	6.45	3.77	57.00
6—8—5	1	4.93	10.66	10.16	4.73	....
7—6—5	6	5.48	6.93	6.22	5.02	52.66
8—6—6	2	6.32	6.90	6.39	5.65	49.30
8—16—8	1	6.57	17.93	17.35	8.11	57.00
10—3—8	1	8.52	4.40	3.86	7.62	80.00
10—3.5—8	1	8.26	8.00	4.42	8.33	....
10—16—14	1	7.83	17.63	17.07	13.36	67.00

CONFORMITY TO GUARANTEE

Fifty-five of the 128 brands analyzed were found to contain less than the guarantee of one or more of the three constituents. The total number of guarantees on the 128 brands was 444, the total number of deficiencies 87, the per cent deficient 19.6. This shows some improvement over last year when the corresponding per cent was 24.5. Many of these deficiencies were comparatively negligible, however, the small deficiency in one constituent being offset in value by overrun in other constituents.

A detailed summary of the deficiencies in the 55 brands which failed to meet their guarantees follows:

	Brands	Total Deficiencies
Nitrogen, total phosphoric acid, available phosphoric acid and potash	1	4
Nitrogen, total phosphoric acid and potash	0	0
Nitrogen, available phosphoric acid and potash	0	0
Nitrogen, total phosphoric acid and available phosphoric acid	2	6
Nitrogen and total phosphoric acid	2	4
Nitrogen and available phosphoric acid	1	2
Nitrogen and potash	8	16
Nitrogen	8	8
Total phosphoric acid, available phosphoric acid and potash	4	12
Total phosphoric acid and potash	0	0
Available phosphoric acid and potash	0	0
Potash	5	5
Total phosphoric acid and available phosphoric acid	6	12
Total phosphoric acid	14	14
Available phosphoric acid	4	4
	55	87

NITROGEN DEFICIENCIES

Seven brands of nitrate of soda and two brands of sulphate of ammonia were analyzed. All met their guarantee. One hundred fourteen brands were guaranteed to contain nitrogen in amounts varying from 0.82 per cent to 8.22 per cent. Twenty-two of these failed to meet the guarantee. Six were below the guarantee by less than one-tenth per cent. Seven were below by more than one-tenth per cent but less than two-tenths per cent. Five were below by more than two-tenths per cent but less than three-tenths per cent. Two were below by more than three-tenths per cent but less than four-tenths per cent. One was below by more than four-tenths per cent but less than one-half per cent. One failed to meet the guarantee by 0.54 per cent.

PHOSPHORIC ACID DEFICIENCIES

Three brands of sixteen per cent acid phosphate were analyzed and found to meet the guarantee. One hundred fifteen other brands were guaranteed to contain phosphoric acid. Twenty-nine of these were deficient in total phosphoric acid and eighteen in available phosphoric acid. Eleven failed to meet the guarantee of total phosphoric acid by less than one-fourth per cent. Thirteen were more than one-fourth per cent below but less than one-half per cent. Four were more than one-half per cent below but less than three-fourths per cent. One was more than three-fourths per cent below but less than one per cent. Seven failed to meet the guarantee in available phosphoric acid by less than one-fourth per cent. Three were more than one-fourth per cent below but less than one-half per cent. Six were more than one-half per cent below but less than three-fourths per cent. Two were more than one per cent below.

POTASH DEFICIENCIES

One sample of muriate of potash was analyzed and found to meet the guarantee. One hundred six other brands were guaranteed to contain potash in amounts varying from 2.00 per cent to 14.00 per cent. Eighteen of these failed to meet the guarantee. Ten were deficient by less than one-fourth per cent. Five were deficient by more than one-fourth per cent but less than one-half per cent. Two were deficient by more than one-half per cent but less than three-fourths per cent and one was deficient by more than three-fourths per cent but less than one per cent.

In the tabulation of the analyses in the following pages deficiencies of two-tenths of one per cent or more are shown in Italics. The names of the manufacturers are arranged alphabetically, and under the manufacturer the different brands are arranged alphabetically or numerically by formula.

	Nitrogen		Phosphoric Acid				Potash	
			Total		Available			
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
American Agricultural Chemical Co., New York City.								
Agrico Fertilizer for Corn	2.47	2.65	10.50	10.90	10.00	10.02	6.00	6.24
Agrico Fertilizer for Potatoes	3.29	3.29	8.50	8.58	8.00	8.00	6.00	6.36
Agrico Fertilizer for Truck	4.11	3.96	10.50	10.78	10.00	10.00	5.00	5.38
Aroostook Potato Manure	4.11	4.28	8.50	8.56	8.00	7.82	7.00	7.00
Bowker All Round Fertilizer	2.47	2.38	8.50	8.62	8.00	8.00	4.00	3.90
Bowker's Market Garden Fertilizer	3.29	3.45	8.50	9.19	8.00	8.00	4.00	4.18
Bowker's Potato Vegetable Phosphate	1.65	1.68	9.50	9.50	9.00	9.00	3.00	3.02
Bowker's Square Brand Corn and Grain Fertilizer	1.65	1.65	8.50	8.50	8.00	8.00	2.00	2.00
Bowker's Stockbridge Early Crop Manure	4.11	4.11	8.50	*8.30*	8.00	*7.52*	7.00	7.18
Bowker's Stockbridge Potato and Vegetable Manure	3.29	3.58	6.50	6.55	6.00	6.07	10.00	10.00
Bowker's Stockbridge Trucker	4.11	4.11	10.50	10.88	10.00	10.22	5.00	5.11
Bowker's Sure Crop Fertilizer	0.82	0.92	9.50	9.46	9.00	*8.76*	4.00	*3.77*
Bradley's Complete Manure for Potatoes and Vegetables	3.29	3.43	8.50	8.78	8.00	8.30	7.00	7.00
Bradley's Complete Manure with 10% Potash	3.29	3.39	6.50	6.50	6.00	6.00	10.00	9.83
Bradley's Corn Phosphate	1.65	1.83	8.50	8.88	8.00	8.34	2.00	2.16
Bradley's Eclipse Fertilizer	0.82	1.05	9.50	9.80	9.00	9.18	4.00	4.00
Bradley's Potato Fertilizer	1.65	1.65	9.50	9.50	9.00	9.00	3.00	3.00
Bradley's Potato Manure	2.47	2.47	8.50	*8.28*	8.00	*7.64*	4.00	3.81
Bradley's XL Superphosphate of Lime	2.47	2.51	10.50	10.56	10.00	*9.48*	4.00	4.05
Corn Favorite	2.47	2.64	10.50	11.31	10.00	10.53	6.00	6.08
E. Frank Coe's Columbian Corn and Potato Fertilizer	1.65	1.65	9.50	*9.16*	9.00	*8.77*	3.00	3.00
Farmer's Friend Fertilizer	1.65	1.79	12.50	12.50	12.00	12.00	4.00	4.54
General Crop Fertilizer	1.65	1.70	9.50	9.50	9.00	9.00	3.00	3.10
Grass and Lawn Top Dressing	4.94	4.88	6.50	6.97	6.00	6.45	4.00	*3.77*
Lister's Corn and Potato Fertilizer	1.65	1.67	9.50	9.50	9.00	9.02	3.00	3.09
Monarch Fertilizer	3.29	3.29	8.50	8.43	8.00	7.77	4.00	3.89
Nitrate of Soda	15.22	15.22	....	....	....	....	....	....

AMERICAN AGRICULTURAL CHEMICAL CO.—*Cont.*								
Peerless Potato Manure	3.29	3.11	8.50	8.80	8.00	8.40	7.00	6.91
Prolific 10% Potash Fertilizer	1.65	1.79	8.50	8.50	8.00	*7.72*	10.00	10.09
Pulverized Sheep and Goat Manure	1.23	1.60	0.50	0.99	....	....	2.00	2.36
Special Grass Top Dressing	6.58	*6.04*	6.50	7.11	6.00	6.57	6.00	*5.09*
Special Ground Bone	2.08	2.36	22.88	23.86	....	....	....	....
APOTHECARIES HALL CO., Waterbury, Conn.								
Liberty Corn and all Crops 2—8—2	1.64	2.01	8.00	8.62	8.00	8.00	2.00	2.59
Liberty Potato and Vegetable 2—8—10	1.64	2.02	8.00	8.92	8.00	8.00	10.00	11.28
Liberty Corn Fruit and all Crops 2—12—4	1.64	2.26	12.00	12.84	12.00	12.00	4.00	4.64
Liberty Potato and Market Gardeners' Special 4—8—4	3.29	3.38	8.00	8.95	8.00	8.00	4.00	4.45
Liberty Potato and General Crops 4—8—10	3.29	3.40	8.00	8.60	8.00	8.00	10.00	10.06
Liberty High Grade Market Gardeners' 5—8—7	4.11	4.11	8.00	9.16	8.00	8.24	7.00	7.40
Liberty Top Dresser 10—3½—8	8.22	8.52	3.50	4.40	3.50	3.86	8.00	*7.62*
Liberty Lawn Fertilizer	3.29	4.23	11.00	11.61	4.00	7.29	....	....
Nitrate of Soda	14.80	15.26	....	....	....	....	....	....
ARMOUR FERTILIZER WORKS, Carteret, N. J.								
Armour's 3-8-4 Fertilizer	2.47	2.74	8.50	9.32	8.00	8.58	4.00	4.20
Armour's 5-8-7 Fertilizer	4.11	4.03	8.50	8.89	8.00	8.19	7.00	7.11
Armour's Sheep and Goat Manure	1.23	1.44	1.00	0.96	....	....	2.00	2.88
Nitrate of Soda	14.81	15.03	....	....	....	....	....	....
Sulphate of Ammonia	20.56	20.97	....	....	....	....	....	....
JOSEPH BRECK AND SONS, Boston, Mass.								
Ram's Head Brand Sheep Manure	1.51	1.51	0.75	0.97	....	....	3.00	*2.77*

	Nitrogen		Phosphoric Acid				Potash	
			Total		Available			
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Burlington Rendering Co.,								
Burlington, Vt.								
Burlington 2-8-10 Fertilizer	1.64	1.73	9.00	*8.75*	8.00	8.00	10.00	10.12
Burlington 2-10-2 Fertilizer	1.64	1.77	11.00	11.00	10.00	10.54	2.00	2.31
Burlington 3-8-4 Fertilizer	2.46	2.78	9.00	*8.69*	8.00	8.11	4.00	4.31
Burlington 4-6-10 Fertilizer	3.29	3.31	7.00	7.00	6.00	6.56	10.00	10.00
Burlington 4-8-4 Fertilizer	3.29	3.29	9.00	9.15	8.00	8.49	4.00	4.33
Burlington 4-8-7 Fertilizer	3.29	3.51	9.00	9.00	8.00	8.54	7.00	7.27
Burlington 7-6-5 Fertilizer	5.74	*5.45*	7.00	6.85	6.00	6.27	5.00	5.20
E. D. Chittenden Co.,								
Bridgeport, Conn.								
Chittenden's Complete Grain with 3% Potash	1.65	1.84	9.50	9.35	9.00	*8.77*	3.00	3.32
Chittenden's High Grade Potato with 7% Potash	4.12	4.12	8.50	8.91	8.00	8.13	7.00	7.05
Nitrate of Soda	15.00	15.31	....	....	....	....	....	....
Consolidated Rendering Co.,								
Boston, Mass.								
Corenco Sheep Manure	1.23	1.29	0.50	1.00	....	....	2.00	2.26
Ground Bone	2.46	3.30	22.90	*22.39*	....	....	....	....
Ground Tankage	4.92	5.28	14.00	15.15	....	....	....	....
Muriate of Potash	....	....	....	....	....	....	50.00	50.10
Nitrate of Soda	15.22	15.46	....	....	....	....	....	....
Superphosphate (acid phosphate)	....	....	17.00	17.24	16.00	16.40	....	....
John C. Dow Co.,								
Boston, Mass.								
Dow's Pure Ground Bone	2.00	2.14	24.00	25.58	10.00	13.13	....	....

EASTERN STATES FARMERS' EXCHANGE,								
Springfield, Mass.								
Eastern States Acid Phosphate	....	....	16.50	17.92	16.00	16.70	....	....
Eastern States 3-12-3 Open Formula Fertilizer	2.47	2.70	....	12.60	12.00	12.00	3.00	3.04
Eastern States 4-16-4 Open Formula Fertilizer	3.29	3.44	....	17.12	16.00	16.04	4.00	4.28
Eastern States 5-8-7 Open Formula Fertilizer	4.11	4.11	....	9.03	8.00	8.17	7.00	6.86
Eastern States 5-10-5 Open Formula Fertilizer	4.11	4.20	....	11.27	10.00	10.23	5.00	5.34
Eastern States 8-6-6 Open Formula Fertilizer	6.58	6.60	....	6.69	6.00	6.21	6.00	6.21
Eastern States 8-16-8 Open Formula Fertilizer	6.57	6.57	....	17.93	16.00	17.35	8.00	8.11
Eastern States 10-16-14 Open Formula Fertilizer	8.22	*7.83*	....	17.63	16.00	17.07	14.00	*13.36*
Eastern States Fine Bone Meal	2.46	3.10	23.00	23.00	....	....	....	....
Nitrate of Soda	14.80	15.12	....	....	....	....	....	....
Eastern States Sulphate of Ammonia	20.55	20.55	....	....	....	....	....	....
ESSEX FERTILIZER CO.,								
Boston, Mass.								
Essex Fish Fertilizer 3-8-4	2.46	2.70	9.00	9.20	8.00	8.12	4.00	4.22
Essex Peerless Potato Manure 4-6-10	3.28	3.22	7.00	7.00	6.00	6.14	10.00	10.00
Essex Complete Manure 5-8-7	4.10	4.22	9.00	9.17	8.00	8.39	7.00	7.03
Essex Top Dressing 7-6-5	5.74	*5.27*	7.00	7.00	6.00	6.18	5.00	*4.53*
INTERNATIONAL AGRICULTURAL CORPORATION,								
Woburn, Mass.								
16% Acid Phosphate	....	....	16.50	16.99	16.00	16.57	....	....
Bone Meal	2.50	2.93	22.00	22.49	....	....	....	....
Caribee Goat Manure	1.23	1.25	....	0.94	0.75	0.75	2.50	2.50
New England Special 2-12-4	1.65	1.87	12.50	*12.05*	12.00	*11.45*	4.00	4.00
General Favorite 3-8-4	2.46	2.46	8.50	*8.14*	8.00	*7.48*	4.00	3.81
Special 4-6-10	3.30	3.20	6.50	6.55	6.00	6.07	10.00	*9.72*
Ideal 4-8-4	3.30	3.15	8.50	*8.02*	8.00	*7.48*	4.00	4.15
High Grade Manure 4-8-10	3.30	3.22	8.50	8.50	8.00	8.00	10.00	10.11
Crop Grower 5-8-7	4.12	4.22	8.50	8.73	8.00	8.00	7.00	7.00
Genuine Imported Basic Slag	....	....	18.00	*17.38*	14.40	14.58	....	....
Nitrate of Soda	15.00	15.10	....	....	....	....	....	....

	Nitrogen		Phosphoric Acid				Potash	
			Total		Available			
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Lowell Fertilizer Co.,								
Boston, Mass.								
Lowell Bone Fertilizer 2-10-2	1.64	1.69	11.00	*10.50*	10.00	10.00	2.00	2.05
Lowell Animal Brand 3-8-4	2.46	2.54	9.00	9.00	8.00	8.12	4.00	4.00
Lowell Potato Grower 4-6-10	3.28	3.14	7.00	7.00	6.00	6.26	10.00	10.16
Lowell Corn and Vegetable 4-8-4	3.28	3.28	9.00	9.00	8.00	8.14	4.00	4.00
Lowell Market Garden Manure 5-8-7	4.10	4.16	9.00	9.00	8.00	8.14	7.00	7.00
Lowell Top Dressing 7-6-5	5.74	*5.52*	7.00	7.00	6.00	6.00	5.00	5.09
Manchester Rendering Co.,								
Manchester, N. H.								
Manchester Animal Brand Fertilizer 5-8-7	4.10	4.27	9.00	*8.72*	8.00	8.00	7.00	7.35
Manchester Special Fertilizer	2.46	2.76	9.00	9.08	8.00	8.00	4.00	4.50
Tankage	5.75	7.23	....	11.79	8.00	*6.90*	....	....
Merrimack Farmers' Exchange,								
Concord, N. H.								
Merrimack 2-10-2	1.64	1.71	11.00	*10.50*	10.00	10.00	2.00	2.28
Merrimack 3-8-4	2.46	2.35	9.00	9.13	8.00	8.17	4.00	3.93
Merrimack 4-6-10	3.29	3.37	7.00	*6.80*	6.00	6.00	10.00	10.38
Merrimack 4-8-4	3.28	3.32	9.00	*8.57*	8.00	8.00	4.00	4.03
Merrimack 5-8-7	4.10	4.18	9.00	8.85	8.00	8.07	7.00	7.42
Merrimack Top Dressing 7-6-5	5.74	5.74	....	7.01	6.00	6.59	5.00	5.25

NATURAL GUANO CO.,								
Aurora, Ill.								
Sheep's Head Brand Pulverized Sheep Manure	1.85	2.39	1.25	2.24	1.00	1.88	2.00	2.96
NEW ENGLAND FERTILIZER CO.								
Boston, Mass.								
New England Standard Phosphate 1-9-4	0.82	1.21	10.00	*9.70*	9.00	9.00	4.00	4.21
New England Corn Phosphate 2-10-2	1.64	1.67	11.00	*10.12*	10.00	*9.38*	2.00	2.16
New England Super 3-8-4	2.46	2.40	9.00	*8.73*	8.00	*7.38*	4.00	4.27
New England Complete Manure 4-6-10	3.28	3.31	7.00	7.00	6.00	6.10	10.00	10.21
New England Potato and Vegetable Manure 4-8-4	3.28	3.58	9.00	9.00	8.00	8.24	4.00	4.31
New England Top Dressing 7-6-5	5.74	*5.42*	7.00	7.00	6.00	6.00	5.00	5.03
NEW ENGLAND RENDERING CO.,								
Brighton, Mass.								
Ground Bone	2.08	2.23	22.90	24.68	....	....	....	....
PACIFIC MANURE AND FERTILIZER CO.,								
San Francisco, Calif.								
Groz-It Brand Pulverized Sheep Manure	1.50	*1.23*	1.25	*0.81*	0.75	0.64	3.00	*2.28*
PARMENTER AND POLSEY FERTILIZER CO.,								
Boston, Mass.								
P. and P. Plymouth Rock Brand 3-8-4	2.46	2.47	9.00	*8.73*	8.00	8.00	4.00	4.03
P. and P. Maine Potato Fertilizer 4-6-10	3.29	3.37	7.00	6.82	6.00	6.00	10.00	10.85
P. and P. Top Dressing 7-6-5	5.74	*5.48*	7.00	*6.69*	6.00	6.25	5.00	5.00
PREMIER POULTRY MANURE CO.,								
Chicago, Ill.								
Premier Brand Pulverized Sheep Manure	1.64	3.91	1.00	2.53	....	1.91	2.00	2.84

	Nitrogen		Phosphoric Acid				Potash	
			Total		Available			
	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	Found
Pulverized Manure Co.,								
Chicago, Ill.								
Wizard Brand Pulverized Sheep Manure	2.00	1.86	....	1.33	1.25	1.06	2.00	2.48
Rogers and Hubbard Co.,								
Portland, Conn.								
All Soils-All Crops Fertilizer	3.30	3.35	10.50	11.16	10.00	10.52	4.00	4.08
Corn and Grain Fertilizer	0.82	0.84	10.50	10.91	10.00	10.35	3.00	3.00
High Grade Fertilizer	2.46	2.72	8.50	9.18	8.00	8.14	10.00	10.00
Oats and Top Dressing	8.22	8.26	8.00	8.00	3.00	4.42	8.00	8.33
Rogers and Hubbard 5-8-7 Fertilizer	4.11	4.11	8.50	8.42	8.00	*6.76*	7.00	7.06
Rogers and Hubbard Potato Fertilizer	1.64	1.76	10.50	11.09	10.00	10.45	4.00	4.36
Soluble Corn and General Crops Manure	2.46	3.09	10.00	10.10	8.00	8.20	6.00	6.56
Soluble Potato Manure	4.93	4.93	10.00	10.66	8.00	10.16	5.00	*4.73*
Swift and Co.,								
Baltimore, Md.								
Vigoro	3.29	3.39	12.30	12.58	12.00	12.33	4.00	4.59

~~PAS~~
~~630.72~~
~~N532~~
~~no.233-250~~